



**SUSWA**  
Kenya



**Project Facts**

**Product**

Dynamic Compaction, Dynamic Replacement

**Market**

Power generation, transmission & distribution

**Client**

Siemens AG

**Main Contractor**

CCECC

**Achievements**

- Dynamic Compaction of 84 089 m<sup>2</sup> and Dynamic Replacement of 18 411m<sup>2</sup>.
- Meeting stringent handover dates despite delays in the start of the project, on-site poulder modification to suit change in design to dynamic replacement, extended rainfall periods and working periods strictly limited to daylight hours.

• **About the project**

The initial scope of the project entailed treatment by Dynamic Compaction of a 102 500m<sup>2</sup> site for the development of a Converter Substation in Suswa, Kenya. This substation forms part of the HVDC interconnection between the electrical power systems of Kenya and Ethiopia, allowing exchange of 2000MW in both directions. By the end of the project, the scope included both Dynamic Compaction and Dynamic Replacement.

• **Challenges**

The considerable shipment duration of the imported cranes, customs delays and annual company shutdowns led to the extension of the project start and end date. The end date was further delayed by extended periods of heavy rainfall, encountering unexpected uncompressible saturated clays which required a change in treatment type, on-site poulder modification to allow for rock driving and an unreliable rock supply.

• **The solution**

The site was generally treated by Dynamic Compaction and where clays were encountered, by Dynamic Replacement. The treatment method was either shallow or deep treatment, with the site subdivided into 3 Zones and a Road section. Deep treatment areas were treated by primary and secondary prints followed by ironing, and shallow treatment areas were treated by primary prints followed by ironing. To carry out the works timeously, extended shifts (limited strictly to daylight) were implemented.